

## Draft Financial Assurance Plan – Navigator CO<sub>2</sub>

### 3. FINANCIAL RESPONSIBILITY 40 CFR 146.85

#### HEARTLAND GREENWAY STORAGE PROJECT

##### **Facility Information**

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Pursuant to 40 CFR 146.85, Heartland Greenway Carbon Storage, LLC (HGCS) has prepared a Financial Responsibility document which describes the cost of covering corrective action (if required), post-injection monitoring, well plugging and abandonment, and site closure activities at HGSS. This document also describes HGCS's approach to securing the adequate and appropriate financial instruments required to cover for the expenses outlined herein.

##### **3.1. Estimated Costs**

HGCS has examined all the wells (oil and gas, saltwater disposal, wastewater injection) within the surface project of the storage complex. Subsequently, HCGS determined that there are no wells in the proposed project area of review (AoR) that penetrate the storage complex and therefore, do not require corrective action (see *AoR and Corrective Action Plan*). Consequently, **Table 3-1** lists the anticipated costs of conducting the following activities at HGSS:

- Plugging or conversion of injection wells
- Post-injection site care activities
- Site closure
- Emergency and remedial response

HGCS has outlined the following key assumptions to determine cost basis:

- All injection wells are converted to in-zone monitoring wells post-injection.
- Post-injection activities include monitoring as outlined in the *Post-Injection Site Care and Site Closure Plan* for a period of 15 years after cessation of injection, any well

maintenance/upkeep, AoR reevaluations as required, and monitoring facilities/personnel costs.

- Site closure entails plugging and abandonment of project wells as outlined in the *Well Plugging and Abandonment Plan* and restoring well sites.
- Emergency and Remedial Response includes costs to cover for an unmitigated leak from a project well which includes cost of
  - Isolating the leak
  - Controlling the leaky project well
  - Plugging the leaky project well
  - Safely disposing any produced fluids
  - Drilling a relief well
  - Drilling an additional in-zone monitor well, and
  - Drill and additional above-zone monitor well
- Costs were assessed based on vendor quotes and estimates in 2022 dollars and adjusted for yearly inflation
- Cost of emergency and remedial response was estimated to occur at the end of injection when the buildup in reservoir pressure and consequent risk of leakage is the highest.

**Table 3-1. Financial Responsibility Estimation for HGSS.**

Cost Item	Estimated Cost (in 1000 US Dollars)
Injection Well Conversion Post-Injection	Not responsive - confidential business information
Post-Injection Site Care	
Site Closure and Well Plugging	
Emergency and Remedial Response	
<b>Total</b>	

The cost estimated in **Table 3-1** are based on quotes and technical data available during the permit application development process and are projected to cover the cost of employing an independent third-party subcontractor to perform the services or procurement of requisite goods. These estimates are based upon historic price data from other projects managed by HGCS and its project partners, cost quotes from third-party companies, regulatory guidance documents, and HGCS' best judgment about the level of effort required to complete an activity. These values may change during the project. The financial assurance will be fulfilled based on net present value (**Table 3-2**) the total in **Error! Reference source not found.** being met in 2056. If there are significant changes, HGCS will reevaluate the value of the financial instruments, and any adjustment will be submitted for approval.

**Table 3-2 Net Present Value for funding the financial assurance commitment for the HGSS site**

Calendar Year	2025	2030	2035	2040	2045	2050
Plugging Injection Wells (in 1000 USD)	Not responsive - confidential business information					
Post-Injection Site Care (in 1000 USD)						
Site Closure (in 1000 USD)						
Emergency and Remedial Response (in 1000 USD)						
Total Financial Assurance (in 1000 USD)						

### 3.2. Financing Instruments

Financial support of Navigator CO<sub>2</sub> and the Heartland Greenway project is anchored by BlackRock Inc's Infrastructure group which provides access to a robust balance sheet and a broad array of risk mitigation instruments. HGSS will leverage existing insurance coverages to the extent possible. For example, the exposures presented by the CCS operation may be folded into existing Commercial General Liability policies and associated excess liability programs.

The following specialized tools will be in place for the duration of injection operations, and during post-injection site care as applicable. All insurance policies will be procured from insurers with AM Best ratings of at least A- and not less than size category VII and licensed to conduct business in the state of Illinois. Though commercial insurance policies will be procured at the outset, it is the intent of Navigator CO<sub>2</sub> to explore the option of employing formalized self-insurance through a captive insurance company to meet selected coverage requirements over time with the approval of the Director. Commercial policies will include deductibles that are well within the capability of our organization to absorb.

**First Party (Property) Insurance** - The surface systems compression, piping and injection equipment will be continually insured for the duration of operations by a Builders Risk insurance policy during construction, and an all-risk property insurance program providing full replacement cost coverage during operation. In addition to protecting the assets of the owner, this coverage form will address several of the requirements around emergency repairs in the event of a mechanical breakdown, natural hazard event, or other first party loss. This coverage will be rated based on total insured values and may combine coverage with other owned equipment. Policy limits of not less than the calculated Maximum Foreseeable Loss will be procured and maintained. This policy will be kept in force until injection equipment is disassembled and removed. Valuation may be shifted from replacement cost to actual cash value upon well plugging.

**Operators Extra Expense (Control of Well) Insurance** - This specialized coverage form is specifically designed to support an emergency response plan with expertise and funding in the event of an uncontrolled leak at the injection site or elsewhere on the property. It can also provide emergency pollution remediation response, and support well re-drill or sidetrack drilling to recover an injection well if needed. A limit of not less than \$25 million will be sufficient to provide the expert resources required to support an emergency or remedial action. This coverage will be custom crafted to support carbon capture and sequestration operations and will be maintained until completion of well plugging.

**Pollution Legal Liability** – This coverage will be customized to meet the needs of a CCS site and will respond to third party claims alleging damage or injury related to CO<sub>2</sub> in storage as well as for onsite remediation. As third party claims are not anticipated due to the largely owned nature of the site, a policy of not less than \$100 million will be maintained until liability for the sequestered CO<sub>2</sub> is assumed by the state. This policy will be put in place prior commencement of injection operations. Our relationship with one insurer providing this coverage in support of CCS projects and their willingness to support our project is documented by the attached letter. During construction, a **Contractors Pollution Liability** will be required to be procured by the general contractor to address any environmental issues that may arise during this phase. This policy provides similarly broad pollution and remediation coverage and addresses the unique circumstances surrounding construction.

**Secured Trust** - The costs of ultimate well plugging and longer-term site care and monitoring do not lend themselves to an insurance solution, as they represent relatively known liabilities. Navigator CO<sub>2</sub> has calculated this obligation will require a fund of \$83.372 million to be amassed during project operation and available to meet closure, decommissioning and site monitoring expenses at project close. A dedicated trust to be funded with equal annual contributions over the first fifteen years of injection operations will address these funding needs. The trust will be secured with a non-cancellable surety bond whose terms mirror these obligations. The face amount of this surety instrument will be adjusted downward as the associated trust is funded over time. A letter expressing support for this approach from Marsh is attached.

The array of risk financing tools to be employed in addressing the key financial assurance requirements of section 146.85 A (2) are:

**(i) Corrective action** – The largest element of this category is response requirements in the event a dormant well in the injection vicinity provides a potential pathway for CO<sub>2</sub> migration. As respects corrective actions - damage to an existing injection well will be addressed through the first party coverage provided. A well that is damaged to the point of breach will have additional support from the Control of Well policy. Unexpected migration involving dormant wells or otherwise requiring corrective action will be addressed by the Pollution Legal Liability form.

**(ii) Injection well plugging** – Plugging of the injection wells and any monitoring wells will be funded through the secured trust which will be fully funded during the first two thirds of the span of anticipated injection operations and secured at the fully funded level by a surety bond from day one of injection.

**(iii) Post injection site care and site closure** – The PISC and closure periods will be supported with funds amassed in the secured trust. Any unplanned releases associated with the plugging operation or that manifest during site monitoring will be addressed by the Pollution Legal Liability policy.

**(iv) Emergency and remedial response** – This will be primarily addressed through a commercial insurance mechanism, with the type of emergency determining the policy that will serve as primary responder. A well failure will be addressed by the Control of Well policy with repairs supported by the first party (Property) insurance policy. An onsite release or unplanned migration that requires remediation or triggers third party claims will be addressed by the Pollution Legal Liability form. Damage to the injection piping, well equipment or other machinery will be addressed by the Property insurance policy.

**(3) The financial responsibility instrument(s) must be sufficient to address endangerment of underground sources of drinking water.**

This requirement is addressed by the Pollution Legal Liability policy form, which is specifically designed to support remediation if CO<sub>2</sub> leaves its intended place of confinement. This policy will address both remediation and any third-party claims that arise from a release or unanticipated migration.